

Notice of Allowability

Application No.

09/931,987

Applicant(s)

DAVIS

Examiner

Art Unit

Chanh Nguyen

2675

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to appeal brief filed on 10/18/04 and telephone interview on 10/12/05.
2. ☒ The allowed claim(s) is/are 1-7,9-14 and 16-22.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 10/12/05.
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


CHANH NGUYEN
PRIMARY EXAMINER

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Jeff A. Holmen on October 12, 2005.

The application has been amended as follows:

Claim 1. (Amended) An apparatus for controlling the position of a screen pointer for an electronic device having a display screen, the apparatus comprising:

a light source for illuminating an imaging surface, thereby generating reflected images;

a single chip for receiving the reflected images, generating digital representations of the reflected images, generating a first set of movement data based on the digital representations of the reflected images, the first set of movement data indicative of relative motion between the chip and the imaging surface, the single chip including a serial interface for outputting motion data in a serial format based on the movement data; wherein the serial interface is configured to be coupled to a host device, and the single chip is configured to provide testing information about the chip to the host device through the serial interface.

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Claim 8. (Cancelled)

Claim 10. (Amended) A method of controlling the position of a screen pointer for an electronic device having a display screen, the method comprising:

illuminating an imaging surface, thereby generating reflected images;

directing the reflected images onto an electronic chip, the electronic chip including an array of photo detectors;

digitizing output values of the photo detectors with the electronic chip, thereby generating digital representations of the reflected images;

correlating at least one version of a first one of the digital representations with at least one version of a second one of the digital representations using circuitry on the electronic chip;

generating with the electronic chip a first set of motion data based on the correlation, the first set of motion data indicative of relative motion in orthogonal axes between the electronic chip and the imaging surface;

outputting movement data in a serial format from the electronic chip based on the generated motion data; and

adjusting the position of the screen pointer in accordance with the movement data, wherein outputting test information from the electronic chip in the serial format to a host device, the test information including results of internal tests performed by the electronic chip.

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Claim 15. (Canceled)

Claim 16 (Amended) An electronic chip for use in an apparatus for controlling the position of a screen pointer, the electronic chip comprising:

an array of photo detectors for receiving reflected light from an imaging surface;

an analog to digital converter coupled to the array of photo detectors for generating digital image data based on outputs of the photo detectors;

a controller coupled to the analog to digital converter, the controller configured to generate a first set of movement data based on the digital image data, the first set of movement data indicative of relative motion between the electronic chip and the imaging surface; and

a serial interface coupled to the controller for outputting motion data based on the generated movement data in a serial format, wherein the serial interface is configured to be coupled to a host device, and the electronic chip is configured to provide testing information about the chip to the host device through the serial interface.

Inquiries

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chanh Nguyen whose telephone number is (571) 272-7772. The examiner can normally be reached on Monday- Friday.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



C. Nguyen
October 15, 2005



Chanh Nguyen
Primary Examiner
Art Unit 2675